



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

NOV 21 2008

EPA Region 5 Records Ctr.



313379

**MEMORANDUM**

REPLY TO THE ATTENTION OF:

SUBJECT: **ACTION MEMORANDUM** – Request for a Emergency Stabilization Action at the Eagle Zinc Site, Hillsboro, Montgomery County, IL (Site ID # B5Y7)

FROM: Craig Thomas, On-Scene Coordinator  
Emergency Response Branch 1 – Section 2

TO: Richard C. Karl, Director  
Superfund Division

THRU: Jason H. El-Zein, Chief *Thomas Heulebach*  
Emergency Response Branch *Robert*

**I. PURPOSE**

The purpose of this memorandum is to document your approval to expend up to \$106,557 to abate an imminent and substantial threat to public health and the environment present at the Eagle Zinc Site (the Site) in Montgomery County, Illinois. This removal action is necessary to mitigate the immediate threat to human health and the environment posed by the presence of elevated levels of lead in soil at the Site.

The response action proposed herein will mitigate Site conditions by reducing trespass and subsequent exposure to contaminated soil. Because hazardous substances exist in substantial quantities and in an uncontrolled manner, this action should be considered an emergency response action. If access to the Site is not addressed through an emergency response action, significant continued trespasser exposure to soil contaminants may occur.

The project will require an estimated 10 working days to complete. This Site does not set any precedents and is not considered nationally significant.

**II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID # ILD980606941

**A. Physical Location and Description**

The city of Hillsboro is the county seat of Montgomery County with a population of 5,515, according to 2000 census data. The site is about 132 acres in size and is on the east side of Hillsboro, north of State Route 16. About 13 acres of the site are covered with buildings. Two ponds are located on the Site - one in the southeast portion and one in the southwest portion. The nearest home is part of a residential area about 200 feet southwest of the Site. The nearest school is Burbank Grade School, which is about 0.25 miles southwest of the Site. Homes to the east of the Site are in an area known as Schram City. Northeast of the Site are a former glass company and trucking firm. North of the Site is a small subdivision and a few small businesses. Low-income multifamily public housing units, a few mobile homes, and privately-owned, single-family homes adjoin the western Site property line.

The plant operated as a zinc oxide manufacturer from 1914 through 2003. Construction of the zinc facility began around 1910 and early operations reportedly began in 1914. The plant manufactured zinc metal and zinc oxide. The method of making zinc oxide used zinc feedstock and anthracite coal. The fuel and feed stocks were delivered to the Site by rail or by truck. Feed stocks varied in quality and included crude or lower-quality zinc byproducts from other manufacturing facilities.

An Illinois Environmental Protection Agency (Illinois EPA) inspection in 1973 found that scrap metal, furnace residue, and metal-bearing material sorted by percentage of zinc were stored on the ground. At one time, much of the southwest corner of the property was covered with piles of a black residue. At times, efforts were made to ship this residue to other facilities to recover zinc, copper, and carbon, but these efforts were costly and limited in times of low market values. During the years of operation, large amounts of slag (a by-product of the manufacturing process) were produced and placed in waste piles or spread on the ground throughout the facility. The facility is currently vacant.

Eagle Picher operated the plant until around 1980. Sherwin-Williams operated the facility from around 1980 to 1984. From 1984 to 2003, the Eagle Zinc Company, a division of T.L. Diamond & Company, Inc., operated the facility. In 1981 and 1982, Illinois EPA sampled surface water and determined that elevated levels of zinc, cadmium, iron, lead, and copper were migrating off the Site. In 1984, Sherwin Williams, under the supervision of Illinois EPA, removed approximately 18,000 tons of residue materials from 10 acres of the Site to reduce impacts on surface water. Raw materials, products, and wastes have regularly been placed on the ground for on-Site storage and disposal. No liners or dikes were constructed under or around these piles. Much of the material was at the southwest corner of the site. The spent materials have included rotary furnace residue, rotary furnace clean out, carbon plant hutch, muffle dross, building demolition debris, spent fire brick, silica-slugs (zinc silicates, zinc ferrites, and iron silicates), and carbonaceous iron slag.

A significant amount of the slag within the facility is stored in two waste piles. One waste pile occupies approximately seven acres and rises up to 15 feet above grade and is located on the southern portion of the facility. The second waste pile occupies approximately 10 acres. It has an average depth of at least one inch and is located on the northwestern half of the facility.

Contaminants of concern associated with the slag piles are metals, primarily cadmium, lead and zinc.

Although there is a gate across the main access road at the southeast end of the site, the only fencing at the site consists of a few strands of barb wire around the northwestern perimeter of the site, which in several areas has been trodden down. The Site may be easily accessed from large areas of the eastern and western perimeters. Access from the north is somewhat restricted due to a large stand of trees and dense vegetation. A small creek and steep hills limit site access from the south.

#### B. Environmental Justice Analysis

According to the Region 5 Superfund Environmental Justice Analysis, the low income percentage for the State of Illinois is 27% and the minority percentage is 32%. To meet the Environmental Justice (EJ) concern criteria, the area within one mile of the Site must have a population that is twice the state low income and/or twice the state minority percentage. That is, the area must be at least 54% low income and/or 64 % minority. There are approximately 3,086 people who live within one mile of the Site (Census 2000 database). The minority population is 4% and the low income population is 42% (Attachment 4). Therefore this Site does not meet the Region's EJ criteria based on demographics as identified in Region 5's Interim Guidelines for Identifying and Addressing a Potential EJ Case, June, 1998.

#### C. Site Background

The Site was used to manufacture zinc oxide and other zinc products from approximately 1914 through 2003. Manufacturing residues containing zinc, lead and other heavy metals were accumulated in piles across much of the Site.

On December 31, 2001 the Potentially Responsible Parties entered into an Administrative Order on Consent with U.S. EPA to conduct a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS is ongoing. The Site was listed on the National Priorities List on September 19, 2007.

In October, 2008, Illinois EPA requested that U.S. EPA control on-going issues with trespass and potential exposure to contaminated soil at the Site. As part of that request, Illinois EPA conducted supplemental screening sampling with using an X-Ray Fluorescence (XRF) machine, and collected confirmatory lab samples from surface residue piles located across the site. Lead was detected as high as 53,975 parts per million (ppm) in surface soil outside site buildings based on Illinois EPA XRF readings conducted in September, 2008; lead was also detected as high as 27,700 ppm from surface residue piles based on soil sampling conducted between April 30<sup>th</sup> and May 2<sup>nd</sup>, 2008 by Illinois EPA (as noted in the May 15, 2008 laboratory report prepared by Prairie Analytical Systems, Inc.). These lead levels exceed the Illinois Department of Public Health (IDPH) Lead Poisoning Prevention Code guideline of 1,000 ppm.

U.S. EPA and Illinois EPA conducted a Site Evaluation on October 7, 2008. Clear evidence of Site trespass was observed. Based on this evidence U.S. EPA determined locations where installation of fencing would greatly reduce on-site trespass.

### **III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions present at the Site constitute an imminent and substantial threat to the public health, or welfare, and the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as amended, 40 C.F.R. Part 300. These factors include, but are not limited to, the following:

- 1) *Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;*

Human populations and animals are exposed to pollutants associated with the Site in the form of contaminated surface soil. Lead was detected as high as 53,975 parts per million (ppm) in surface soil outside site buildings based on Illinois EPA XRF readings conducted in September 2008; lead was also detected as high as 27,700 ppm from surface residue piles based on soil sampling conducted between April 30<sup>th</sup> and May 2<sup>nd</sup>, 2008 by Illinois EPA (as noted in the May 15, 2008 laboratory report prepared by Prairie Analytical Systems, Inc.). These lead levels exceed the Illinois Department of Public Health (IDPH) Lead Poisoning Prevention Code guideline of 1,000 ppm. Zinc was detected as high as 1,347,588 ppm in surface soil outside of site buildings based on Illinois EPA XRF readings conducted in September 2008. Cadmium was detected as high as 140 ppm from surface residue piles based on soil sampling conducted between April 30<sup>th</sup> and May 2<sup>nd</sup>, 2008 by Illinois EPA; the EPA has determined that lifetime exposure to concentrations greater than 0.005 ppm cadmium may cause adverse effects.

There is evidence of regular trespass on the Site, and residences are located within a few hundred feet of the Site. Some of the highest levels of lead in soil are in close proximity to the residential areas and to the buildings where trespassers have congregated.

TCLP Lead was detected as high as 56 milligrams per Liter (mg/L) based on soil sampling conducted between April 30<sup>th</sup> and May 2<sup>nd</sup>, 2008 by Illinois EPA, which exceeded the criteria for toxicity (5 mg/L) for characteristic hazardous waste pursuant to the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 *et seq.*, as amended, and 40 C.F.R. § 261.24. The lead-contaminated soil exhibits the characteristic of toxicity and is therefore a hazardous substance under Section 101(14) of CERCLA.

- 2) *The availability of other appropriate federal or state response mechanisms to respond to the release;*

There are no other Federal or State agencies that have the capacity to respond to the immediate threats at this Site. Illinois EPA requested U.S. EPA assistance in mitigating the threat at this Site.

#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the contamination on Site, and the potential exposure pathways described in Sections II and III above, actual releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

The On-Scene Coordinator (OSC) proposes to undertake the following emergency response actions to address immediate threats posed by the presence of hazardous substances at the Eagle Zinc Site:

- 1) Develop and implement a Site Health and Safety plan, including a Site Emergency Contingency Plan;
- 2) Install site fencing in select areas on the eastern and western site boundaries to reduce site accessibility to trespassers.

This emergency stabilization will be conducted in a manner not inconsistent with the NCP. The OSC will defer planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP to remedial program

The detailed cleanup contractor cost estimate is presented in Attachment 3. The estimated project costs are summarized below.

#### **REMOVAL PROJECT CEILING ESTIMATE**

##### **EXTRAMURAL COSTS:**

Cleanup Contractor (ERRS)	\$ 96,870
Contingency 10%	\$ 9,687
Subtotal	\$106,557
 SUBTOTAL EXTRAMURAL	 \$ 106,557
 TOTAL REMOVAL ACTION PROJECT CEILING	 \$ 106,557

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

#### Applicable or Relevant and Appropriate Requirements

The proposed Emergency Stabilization does not trigger any applicable and relevant and appropriate requirements. However, U.S. EPA's Remedial Program will consider ARARs of Federal and state law in developing the subsequent Remedial Action for the Site.

#### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Continued trespasser exposure and potential exposure to nearby residences.

#### **VII. OUTSTANDING POLICY ISSUES**

None

#### **VIII. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$175,221.11<sup>1</sup>

$$(\$106,557 + \$1,000) + (62.91\% \times \$107,557) = \$175,221.11$$

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<sup>1</sup> Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

**IX. RECOMMENDATION**

This decision document represents the selected emergency response action for the Eagle Zinc Site located in Hillsboro, Montgomery County, Illinois. This document has been developed in accordance with CERCLA as amended and is consistent with the NCP. This decision is based on the Administrative Record for the Site (see Attachment 1). Conditions at the Site meet the NCP 40 C.F.R. §300.415 (b)(2) criteria for a time-critical removal action and I recommend your approval of the proposed action. The total removal project ceiling, if approved, will be \$106,557 of which \$106,557 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE: Laurence J. Schmitt DATE: 11/21/08  
For RK Director, Superfund Division

DISAPPROVE: \_\_\_\_\_ DATE: \_\_\_\_\_  
Director, Superfund Division

**Enforcement Addendum****Attachments**

1. Administrative Record Index
2. Proposed Extent of Fencing
3. Independent Government Cost Estimate
4. Region 5 EJ Analysis

cc: D. Chung, U.S. EPA HQ, 5203-G  
M. Chezick, U.S. DOI, w/o Enf. Addendum  
D. Novak, U.S. EPA Region 5  
R. Lanham, Illinois EPA w/o Enf. Addendum

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NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION



**ATTACHMENT 1****U.S. ENVIRONMENTAL PROTECTION AGENCY  
REMOVAL ACTION****ADMINISTRATIVE RECORD  
FOR  
EAGLE ZINC SITE  
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS****ORIGINAL  
NOVEMBER 12, 2008**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	05/15/08	Rouanet, J., Prairie Analytical Systems, Inc.	Reed, D., Illinois EPA	Laboratory Report re: Sampling Data from the Eagle Zinc Site w/Cover Letter (LPC# 1358070001)	22
2	09/00/08	Illinois EPA	U.S. EPA	XRF Sampling Data for the Eagle Zinc Site w/Attached Sampling Locations Maps	6
3	00/00/00	Thomas, C.,, U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for an Emergency Stabilization Action at the Eagle Zinc Site (PENDING)	

**ATTACHMENT 2**  
**Proposed Extent of Fencing**  
**Eagle Zinc Site- Hillsboro, IL**



Note: Site Boundaries appear in Yellow. Proposed fencing Appears in Blue

### **ATTACHMENT 3**

**INDEPENDENT GOVERNMENT COST ESTIMATE**

**EAGLE ZINC SITE  
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS  
OCTOBER 2008**

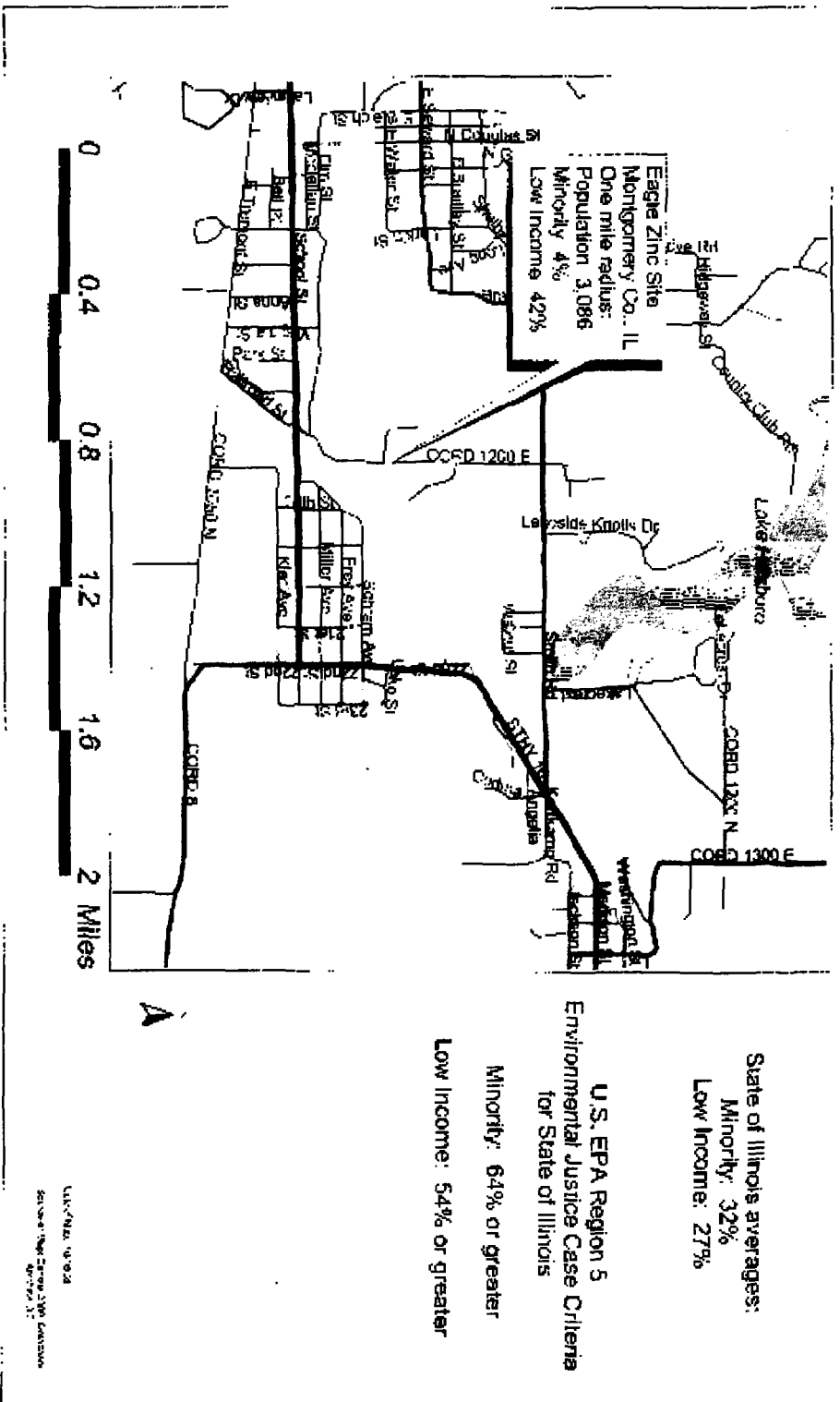
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**NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION**

**ATTACHMENT 4**

**U.S. EPA Region 5 Environmental Justice Analysis  
Eagle Zinc Site  
Hillsboro, IL  
October, 2008**

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**ATTACHMENT 5**

**U.S. EPA Region 5 Enforcement Confidential Addendum  
Eagle Zinc Site  
Hillsboro, IL  
October, 2008**

**ENFORCEMENT ADDENDUM**

**EAGLE ZINC SITE  
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS**

**OCTOBER 2008**

**(REDACTED 3 PAGES)**

**ENFORCEMENT CONFIDENTIAL**  
**NOT SUBJECT TO DISCOVERY**